

Basic Rules

WAC 296-848-200

Section Contents

YOUR RESPONSIBILITY:

To measure and minimize employee exposure to inorganic arsenic

IMPORTANT:

- The sections listed in basic rules apply to all employers covered by the scope of this chapter, WAC 296-848-100. To find additional sections that may apply to you, go to the Scope, WAC 296-848-100, and follow Table 1.

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Rule

WAC 296-848-20010

Preventive practices

You must

- 1) Effectively communicate the hazards of inorganic arsenic by doing both of the following:
 - Keep container labels free of statements that contradict or detract from the labels' hazard warning.

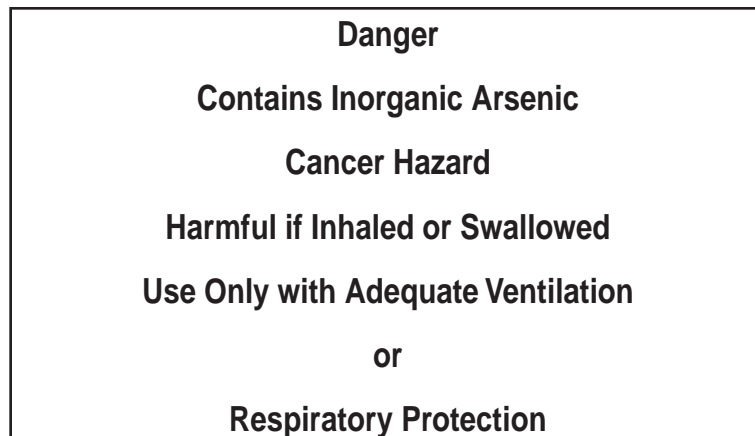


Note:

- You may use labels required by other laws, rules, or ordinances in addition to, or in combination with, labels required by this section.

You must

- Make sure shipping containers, storage containers, and products containing inorganic arsenic are labeled, tagged, or marked with this warning:



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Note:

- You should keep containers tightly covered when not in use to help prevent unnecessary exposure and accidental spills.
- Contaminated items should be handled and disposed of to prevent further exposure in the workplace. For example, vacuuming or wet wiping contaminated equipment helps prevent the release of dust into the air.



Reference:

- Additional requirements are found in other chapters:
 - For spills, leaks, or other releases, go to Emergency Response, chapter 296-824 WAC.
 - For labeling go to:
 - The Safety and Health Core Rules, Chapter 296-800 WAC, and find the section, Label containers holding hazardous chemicals, WAC 296-800-17025
- and**
- Material Safety Data Sheet and Label Preparation, chapter 296-839 WAC.

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You must

2) Establish safe and effective housekeeping and maintenance practices by doing all the following:

- Develop and keep a written housekeeping and maintenance plan that lists appropriate frequencies for:
 - Housekeeping operations
- and**
- Cleaning and maintaining dust collection equipment.
- Keep surfaces free of accumulations of inorganic arsenic, to the degree feasible.
- When cleaning floors and other accessible surfaces:
 - Use vacuuming or other cleaning methods that minimize the release of inorganic arsenic into the air.
 - Don't use compressed air.
 - Select vacuums that have high efficiency particulate air (HEPA) filters.
 - Use and empty vacuums in a way that minimizes the release of inorganic arsenic back into the workplace.



Note:

- Shoveling or brushing may be used only when vacuuming or other cleaning methods haven't been effective.
- Using non-HEPA vacuums will increase inorganic arsenic contamination in air and on area surfaces.

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You must

- Maintain ventilation systems, including dust collection equipment, to make sure they are effective. Do all of the following:
 - Perform periodic inspections for effectiveness.
 - Periodically clean the equipment.
 - Keep a note of the most recent inspection for effectiveness, and cleaning or maintenance.
- 3) Prevent eye or skin contact with:
 - Arsenic trichloride

and

 - Liquid or particulate forms of inorganic arsenic when contact could cause eye or skin irritation.



Note:

- Arsenic trichloride is corrosive and can be quickly absorbed through skin.



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WAC 296-848-20025

Washing facilities

You must

- Provide washing facilities for employees exposed to inorganic arsenic.



References:

- For additional washing facility requirements, go to another chapter, the Safety and Health Core Rules, Chapter 296-800 WAC, and find the section titled, Provide convenient and clean washing facilities, WAC 296-800-23025.



WAC 296-848-20060

Exposure evaluations

IMPORTANT:

- This section applies when workplace operations create potential airborne exposure to inorganic arsenic.
- When you conduct an exposure evaluation in a workplace where an employee uses a respirator, the protection provided by the respirator isn't considered.
- Following this section will fulfill the requirements to identify and evaluate respiratory hazards found in another chapter, Respiratory Hazards, chapter 296-841 WAC.

You must

- 1) Conduct an employee exposure evaluation to accurately determine airborne concentrations of inorganic arsenic by completing Steps 1 through 5 of the Exposure Evaluation Process, each time any of the following apply:
 - No evaluation has been conducted.
 - Changes have occurred in any of the following areas that may result in new or increased exposures:
 - Production
 - Processes
 - Exposure controls such as ventilation systems or work practices
 - Personnel.
 - You have any reason to suspect new or increased exposure may occur.

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WAC 296-848-20060 (continued)

You must

- 2) Provide affected employees and their designated representatives an opportunity to observe exposure monitoring during Step 4 of the Exposure Evaluation Process.
 - Make sure observers don't interfere with exposure measurements.
 - Make sure observers are entitled to:
 - An explanation of your exposure measurement and monitoring procedures
 - Observe all tasks of exposure measurement performed at the workplace
 - and**
 - Receive a copy of the exposure measurement results when you obtain them or are allowed to record the exposure measurement results, if made during observations.
- Make sure observers who enter areas with inorganic arsenic exposure:
 - Are provided with and use the same protective clothing, respirators, and other personal protective equipment (PPE) that employees working in the area are required to use
- and**
- Follow safety and health requirements that apply.

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Exposure Evaluation Process

IMPORTANT:

- Following the Exposure Evaluation Process isn't necessary when you have documentation conclusively demonstrating inorganic arsenic exposures for a particular operation and material, can't exceed the action level (AL) during any conditions reasonably anticipated.
- Documentation can be based on quantitative information such as soil test results **or** qualitative information such as observations of how inorganic arsenic-containing materials are handled.
 - Retain this documentation for as long as you rely on it.

Step 1: Identify all employees who have potential airborne exposure to inorganic arsenic in your workplace.

Step 2: Select employees from those identified in Step 1 who will have their 8-hour exposures monitored.

- Make sure the exposures of the employees selected represent 8-hour exposures for all employees identified in Step 1, including each job classification, work area, and shift.



Note:

- A written description of the procedure for obtaining representative employee exposure monitoring results needs to be kept as part of your exposure records required by this chapter in Exposure records, WAC 296-848-20090. This description can be created while completing Steps 2 through 4 of this exposure evaluation process.

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WAC 296-848-20060 (continued)

Step 3: Determine how you'll obtain employee exposure monitoring results.

- Select and use a method that meets the following criteria for accuracy:
 - $\pm 25\%$, with a confidence level of 95%, when concentrations are potentially at or above an 8-hour time-weighted average of 10 micrograms per cubic meter (Fg/m^3)
- or**
- $\pm 35\%$, with a confidence level of 95%, when concentrations are potentially between the 8-hour time-weighted averages of $5 \mu\text{g}/\text{m}^3$ and $10 \mu\text{g}/\text{m}^3$.



Note:

- Here are examples of methods that meet this accuracy requirement:
- OSHA Method ID105 found by going to <http://www.osha.gov/dts/sltc/methods/toc.html>.
 - NIOSH method 7901 found by going to <http://www.cdc.gov/niosh/homepage.html> and linking to the NIOSH Manual of Analytical Methods.

Step 4: Obtain employee exposure monitoring results by collecting air samples representing employees identified in Step 1.

- Sample at least one shift representative of the 8-hour exposure, for each employee selected in Step 2.
- Make sure samples are collected from each selected employee's breathing zone.

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Note:

- You may use any sampling method that meets the accuracies specified in Step 3. Examples of these methods include:
 - Real-time monitors that provide immediate exposure monitoring results.
 - Equipment that collects samples that are sent to a laboratory for analysis.
- The following are examples of methods for collecting samples representative of 8-hour exposures.
 - Collect one or more continuous samples, for example, a single 8-hour sample or four 2-hour samples.
 - Take a minimum of 4 to 7 brief samples, such as 15-minute samples, during the work shift and at times selected randomly.
- For work shifts longer than 8 hours, monitor the continuous 8-hour portion of the shift expected to have the highest average exposure concentration.

Step 5: Have the samples you collected analyzed to obtain monitoring results representing 8-hour exposures.

- Go to the Scope of this chapter, WAC 296-848-100, and compare employee exposure monitoring results to the values found in Step 1 and follow Step 2 to determine if additional sections of this chapter apply.



Note:

- You may contact your local WISHA consultant for help:
 - Interpreting data or other information.
 - Determining 8-hour employee exposure monitoring results.
- To contact a WISHA consultant:
 - Go to the Safety and Health Core Rules, Chapter 296-800 WAC
and
 - Find the Resources section, and under "Other Resources," find Service Locations for Labor Industries.



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WAC 296-848-20070

Notification

You must

- Provide written notification of exposure monitoring results, including notification about whether exposures exceed the permissible exposure limit (PEL), to employees represented by your exposure evaluation, within 5 business days after the monitoring results become known to you.
 - In addition, when employee exposure monitoring results are above the permissible exposure limit (PEL), provide written notification of all the following within 15 business days after these exposure monitoring results become known to you.
 - Corrective actions being taken and a schedule for completion
 - and**
 - Any reason why exposures can't be lowered to below the PEL.



Note:

- You can notify affected employees either individually or post the notifications in areas readily accessible to affected employees.
- When notifying employees about corrective actions, your notification may refer them to a separate document that's available and provides the required information.



WAC 296-848-20090

Exposure records

You must

- Establish and keep complete and accurate records for all exposure monitoring conducted under this chapter. Make sure the record includes, at least:
 - The name, Social Security number or other unique identifier, and job classification of the employee sampled and all other employees represented by the sampled employee.
 - A description of the methods used to obtain exposure monitoring results and evidence of the method's accuracy.
 - A description of the procedure used to obtain representative employee exposure monitoring results.
 - The date, number, duration, location, and the result of each sample taken.
 - Any environmental conditions that could affect exposure concentration measurements.



Note:

- It's useful to record any personal protective equipment worn by the employee in addition to the type of respirator worn.

You must

- Keep exposure monitoring records for at least 30 years.



Reference:

- To see additional requirements for employee exposure records including access and transfer requirements, go to another chapter, Employee medical and exposure records, chapter 296-802 WAC.
- Exposure monitoring records need to be kept longer than 30 years for employees participating in medical monitoring. Go to Medical records, WAC 296-848-30080, found within this chapter.

